

Work Order ID 83033

April-12-12 12:59:08 PM

Blue - ship May 15
83033

Page 1

Item ID: D206-642-441

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 12/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference

Approvals

Process Plan: MLJ

Date: 12/04/12 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2650

Rev F

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels per PPP D206-642-441 CHG003

N/A

W/O:		WORK ORDER CHANGES								
DATE	STEP	PROCEDURE CHANGE				By	Date	Qty	Approval Chief Eng / Prod.Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)								
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector		
			Initial Chief Eng	Action Description Chief Eng	Sign & Date					

NOTE: Date & initial all entries

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

110

Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Deburr Fwd edge of tube

2-Remove ridge on inside of Fwd edge of tube as per Dwg D2650

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

A/R Aluminum Rod M120164

4-Grind weld flush to cap on top surface only.

5-Cut aft end 138.60" from front of tube

6-Drill pilot holes using drill jig DT8025 & DT8169 (A,B,C,D). Open to Ø0.312".

7-Drill holes for wearplates using DT 8028-7. Open to Ø 0.297".

8-Open using #6 Drill Bit

9-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-7 Drilling Detail

10-Remove inner indexing ridge on aft end of skidtubes as per Dwg D2650

11-Deburr and Blow out all chips from inside the tube

> CF 12-4-23

306 12-04-25

Rm
12-5-7

SAD 12-05-07

W/O:		WORK ORDER CHANGES						
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Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

115

QC5- Inspect part completeness to step on W/O

0.00

115

QC

Memo

0.00

Quality Control

116

QC10- Inspect visual per QSI004- ground welds

0.00

116

QC

Memo

0.00

Quality Control

120

Chemical Conversion Coat per QSI005 4.1

0.00

120

HandFinish

Memo

0.00

Hand Finishing

RM 12-5-7

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

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Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC3- Inspect Part Finish

0.00

130

QC7

0.00

QC

Memo

Quality Control

1 0 BE 12/05/07

W/O:			WORK ORDER CHANGES					
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00

140

Skidtubes

0.00

Skidtubes

Memo

1-Open holes to finished size as per Dwg D2650, D2650-7 Drilling Detail
(without cutting fluid)

2-Countersink crossbolt spacer holes as per Dwg D2650(without cutting fluid)

3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer.

4-Bond D2654-7 web in place as per QSI 015Ensure holes line upAllow 12 Hrs.
cure time before cutting

Start Date: 12/05/07
Time: 4:30

Finish Date: 12-05-08
Time: 7:00

A/RSikaflex-291 12/27/07
Sikaflex expiry date: 13/01/09

OK 12/05/07

W/O:		WORK ORDER CHANGES						
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Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.00

Quality Control

1 0 JE 12-05-08

160

Skidtubes

0.00

160

Skidtubes

Memo

0.00

Skidtubes

1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.
A/R Aluminum Rod m120164 JE 12-05-08

2-Grind welds flush as per Dwg D2650.

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650 Deburr

> a/c 12-5-8

W/O:			WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 12/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

0.00

170

HandFinishing

Skidtubes

Memo

0.00

Skidtubes

Install D2680-041 Nut Plate as per Dwg D2650

- M/CC 12-5-8

180

0.00

180

QC10- Inspect visual per QSI004- ground welds

QC

Memo

0.00

Quality Control

190

0.00

190

QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

5/7/06/06

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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N9000040100

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Item Name: Replacement Skidtube

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1

Cust Item ID:

Required Date: 26/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	Pressure Wash per QSI005 4.3	0.00							
200									
HandFinish		0.00							
Hand Finishing	Memo Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.								
210	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
210									
Powdercoat									
Powder Coating	Memo START TIME: OVEN TEMPERATURE: FINISH TIME:								
220	QC Inspect Part Finish	0.00							
220									
QC									
Quality Control	Memo								

12 05 08 (1)

(1) 12 05 09

(A)

Orange B 117319
Delblue B 121076
Clear Delblue B 118093

Spray paint

Salostio

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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April-12-12 12:59:08 PM

Item ID: D206-642-441 Accept *N900040100* Setup Start *NS1*
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 Item Name: Replacement Skidtube
 Start Date: 12/04/2012 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 26/04/2012 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240 *240* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
250 *250* Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPP D206-642-441 Location: _____ PPP Rev: PPP 8423	0.00 0.00							
260 *260* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							

12/15/11

12/15/14

12-05-11

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Picklist Print

April-12-12 12:59:12 PM

Work Order ID: 83033

83033

Parent Item: D206-642-441

D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:H05.10.11Added D3429-1 per CHG002 KJ/CP/JLM

IPP Rev:I 08-05-01 add QC3 DD verified by:EC

IPP Rev:J 08-09-29 revF as per dwg DD verified by: EC IPP rev K

10.09.27 SS washers for wearplates EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620		Manufactured	No			110	Each	24.0000	1				
D2620									**				
Skidtube, 206 Skidtube													

Location	Loc Qty	Loc Code
LG	24	
77999	1	
79543	2	
79544	1	
81365	1	
81366	1	
82028	12	
82517	6	

D2647		Manufactured	No			110	Each	16.0000	1				
D2647									**				
Cap													

Location	Loc Qty	Loc Code
LG002	16	
75482	16	

D2654-7		Manufactured	No			140	Each	0.0000	1				
D2654-7									**				
Web													

B84200

①

CF 12-4-23

BE 12/04/23
B 79563 *1

DE 12/05/07
①

WORK ORDER CHANGES

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Parent Item: D206-642-441

D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

160

Each

1,108.000

23

23

D2649

Cross Bolt Spacer

**

BE 12/05/08

Location

Loc Qty

Loc Code

LG

769

77574

2

79502

65

79503

399

79564

296

79565

7

LG001

339

65317

1

68224

2

68507

11

71355

2

72704

2

72841

11

73390

8

73857

21

73858

53

73859

4

73860

4

78020

6

78583

2

79566

212

23

CCR264SS3-3

Purchased

No

170

Each

497.0000

2

2

CCR264SS3-3

Cherry Rivet

**

12/5-8

Location

Loc Qty

Loc Code

ST331

497

113973

2

117849

109

119017

386

2

W/O:			WORK ORDER CHANGES					
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D206-642-441

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Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041

Manufactured No

170

Each

118.0000

1

1

D2680-041

Nut Plate

**

W/C 12-5-8

Location

Loc Qty

Loc Code

ST013

116

78016

116

ST019

2

76790

2

ALS4-1032-130

Purchased

No

230

Each

6,003.000

60

60

ALS4-1032-130

Insert

**

60 20 12/05/10

Location

Loc Qty

Loc Code

ST280

205

119084

116

120671

89

ST281

2798

120807

798

120837 ✓

2000

ST282

3000

121269

3000

AN960JD10L

X NAS1149D0332J ✓

Purchased

No

230

Each

0.0000

2

2

***AN960.ID10I ***

Washer

**

2 20 12/05/10

AN960JD416

X NAS1149D0463J ✓

Purchased

No

230

Each

10.0000

1

1

AN960.ID416

Washer

**

1 20 12/05/10

Location

Loc Qty

Loc Code

ST351

10

116289

10

1215

121255 ✓

W/O:		WORK ORDER CHANGES						
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Parent Item: D206-642-441

D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

230

Each

1,382.000

2

2

CR3212-4-03

Cherry Rivet

**

14/10 12-5-8

Location

Loc Qty

Loc Code

FP002

394

114859

394

ST331

988

110139

2

119017

986

D2646

Manufactured

No

230

Each

80.0000

1

1

D2646

Aft Cap

**

1 (SP) 12/05/10

Location

Loc Qty

Loc Code

FP002

80

62678

5

68280

5

70945

1

71070

2

73294

1

73825

2

78018 ✓

22

79500

1

79562

41

W/O:		WORK ORDER CHANGES						
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83033

Parent Item: D206-642-441

D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-1

Manufactured No

230

Each

773.0000

22

22

D2651-1

Plug

**

22

(22)

12/05/10

Location

Loc Qty

Loc Code

FP

200

FP001

601

57869

1

66445

10

69018

2

70827

2

70839

8

71037

8

77559

30

78584

18

79234 ✓

222

FP-A

-28

77559

1

78124

5

81809

66

81954

200

82573

200

D2651-3

Manufactured No

230

Each

1,552.000

22

22

D2651-3

O-Ring

**

22

(22)

12/05/10

Location

Loc Qty

Loc Code

FP001

16

61962

12

73828

4

FP-A

1536

78126 ✓

1536

W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 83033

83033

Parent Item: D206-642-441

D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-15	Manufactured	No	230	Each	31.0000	1	1
D3535-15						**	1 (2P) 12/05/10
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	31	
74512	6	
80328 ✓	12	
81354	13	

D3535-23	Manufactured	No	230	Each	15.0000	1	1
D3535-23						**	1 (2P) 12/05/10
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001 81355 ✓	15	
74508	1	
80330	14	

D3535-37	Manufactured	No	230	Each	5.0000	1	1
D3535-37						**	1 (2P) 12/05/10
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	5	
71668 ✓	5	

D3536-15	Manufactured	No	230	Each	34.0000	1	1
D3536-15						**	1 (2P) 12/05/10
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	34	
73318 ✓	16	
80333	4	
81343	14	

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 7

Work Order ID: 83033

83033

Parent Item: D206-642-441

D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-23	Manufactured	No	230	Each	21.0000	1	1
D3536-23						**	1 (2P) 12/05/10
Gasket							

Location	Loc Qty	Loc Code
FP002 83377 ✓	21	
74510	1	
80334	20	

D3536-37	Manufactured	No	230	Each	20.0000	1	1
D3536-37						**	1 (2P) 12/05/10
Gasket							

Location	Loc Qty	Loc Code
FP002	20	
66823 ✓	8	
82623	12	

D3537-1	Manufactured	No	230	Each	42.0000	6	6
D3537-1						**	6 (2P) 12/05/10
Wearpad							

Location	Loc Qty	Loc Code
FG 81362 ✓	10	
79833	10	
FP002	32	
69817	5	
80337	4	
81361	23	

D3537-3	Manufactured	No	230	Each	33.0000	1	1
D3537-3						**	1 (2P) 12/05/10
Wearpad							

Location	Loc Qty	Loc Code
FP002	33	
78836 ✓	24	
80338	9	

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Page 7

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 8

Work Order ID: 83033

Parent Item: D206-642-441

Parent Item Name: Replacement Skidtube

83033

D206-642-441

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

230

Each

1,647.000

2

2

MS27039-1-08

Screw

**

2

(2P)

12/05/11

Location

Loc Qty

Loc Code

ST291

1647

117423

81

119075

1

120308

804

121011 ✓

261

121243

500

MS27039-4-06

Purchased

No

230

Each

153.0000

1

1

MS27039-4-06

Screw

**

1

(2P)

12/05/11

Location

Loc Qty

Loc Code

ST292

153

119075 ✓

153

MS27039C1-08

Purchased

No

230

Each

1,874.000

60

60

MS27039C1-08

SCREW

**

60

(2P)

12/05/11

Location

Loc Qty

Loc Code

FP002

1

116022

1

ST292

1854

120308

354

121068

500

121162 ✓

1000

ST293

19

116373

3

118077

14

119309

2

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W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 83033

83033

Parent Item: D206-642-441

D206-642-441

Parent Item Name: Replacement Skidtube

Start Date: 12/04/2012

Required Date: 26/04/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

230

Each

2,777.000

60

60

NAS1149C0332R

**

60

28

12/05/10

Washer

Location

Loc Qty

Loc Code

ST297

121509 ✓

257

119736

196

120648

61

ST298

2520

121255

2520

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W/O:		WORK ORDER CHANGES						
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

F

NOTES:

- MATERIAL: N/A
- FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- IDENTIFICATION: NONE
- WEIGHT: N/A
- WELD PER DART QSI 004
- DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

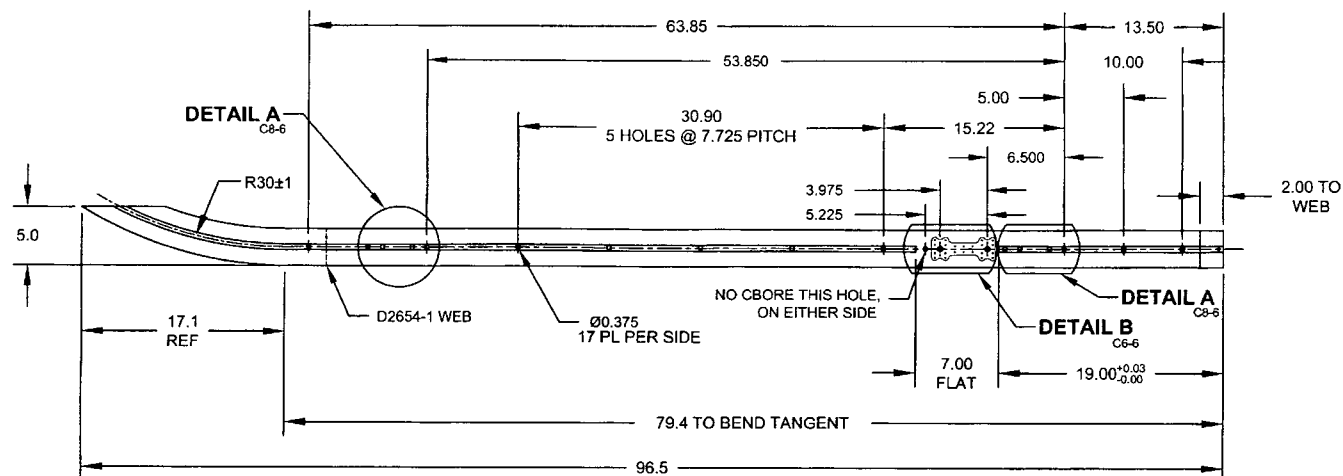
NO. 83033 MCT

12/04/12

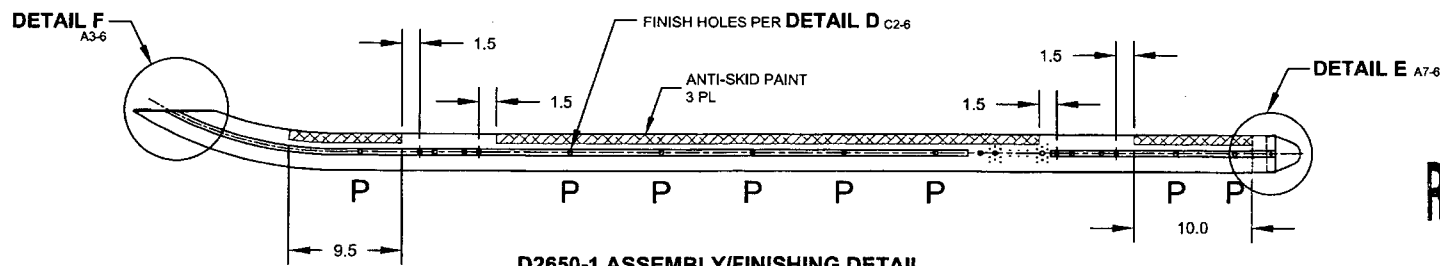
RELEASED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	RMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW; INCCRP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 1 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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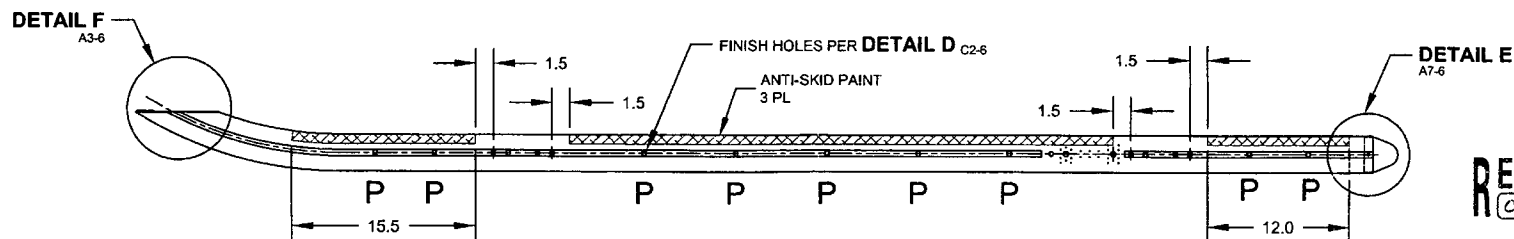
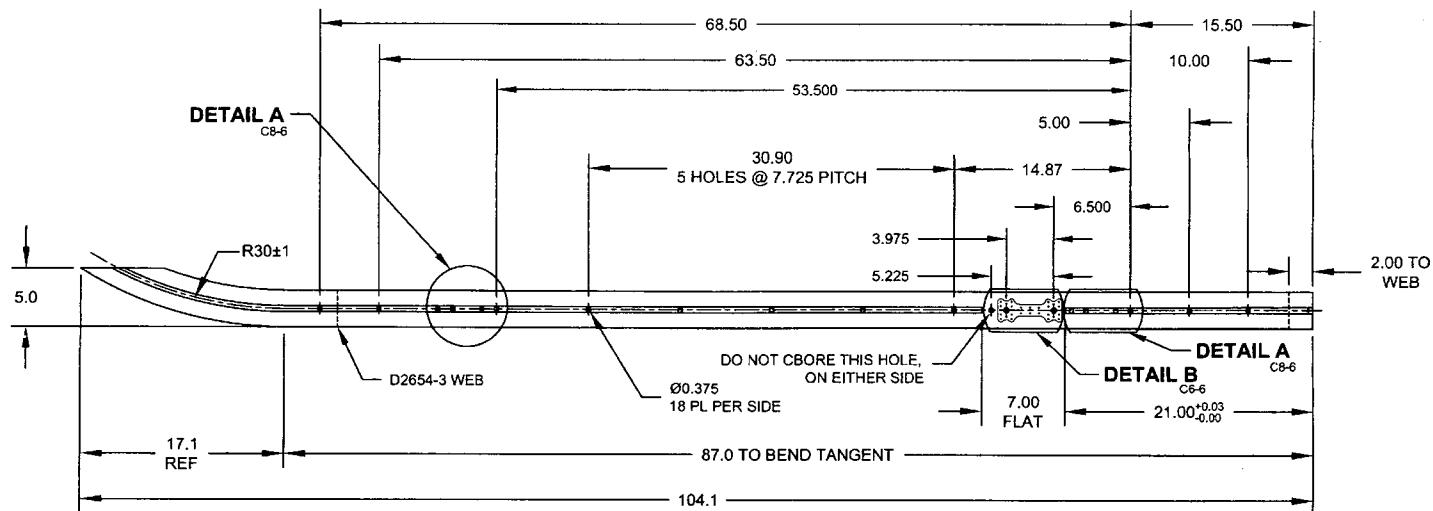
D2650-1 BENDING/DRILLING DETAIL





D2650-1 ASSEMBLY/FINISHING DETAIL

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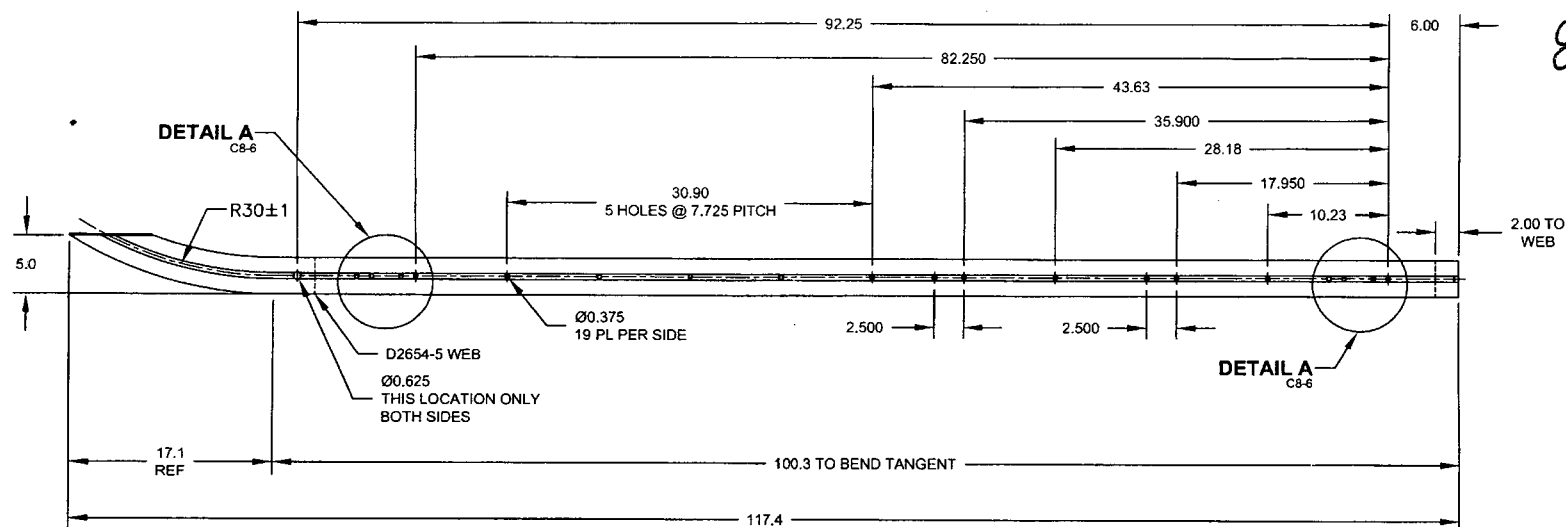
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DRAWN	AJS	PORT HADLOCK, WA	
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MFG. APPR.		D2650	SHEET 2 OF 6
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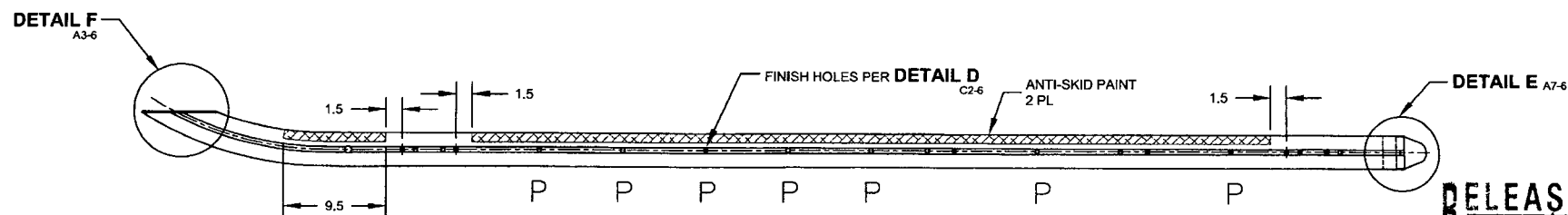
DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
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MFG. APPR.		D2650	SHEET 3 OF 6
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D2650-5 BENDING/DRILLING DETAIL

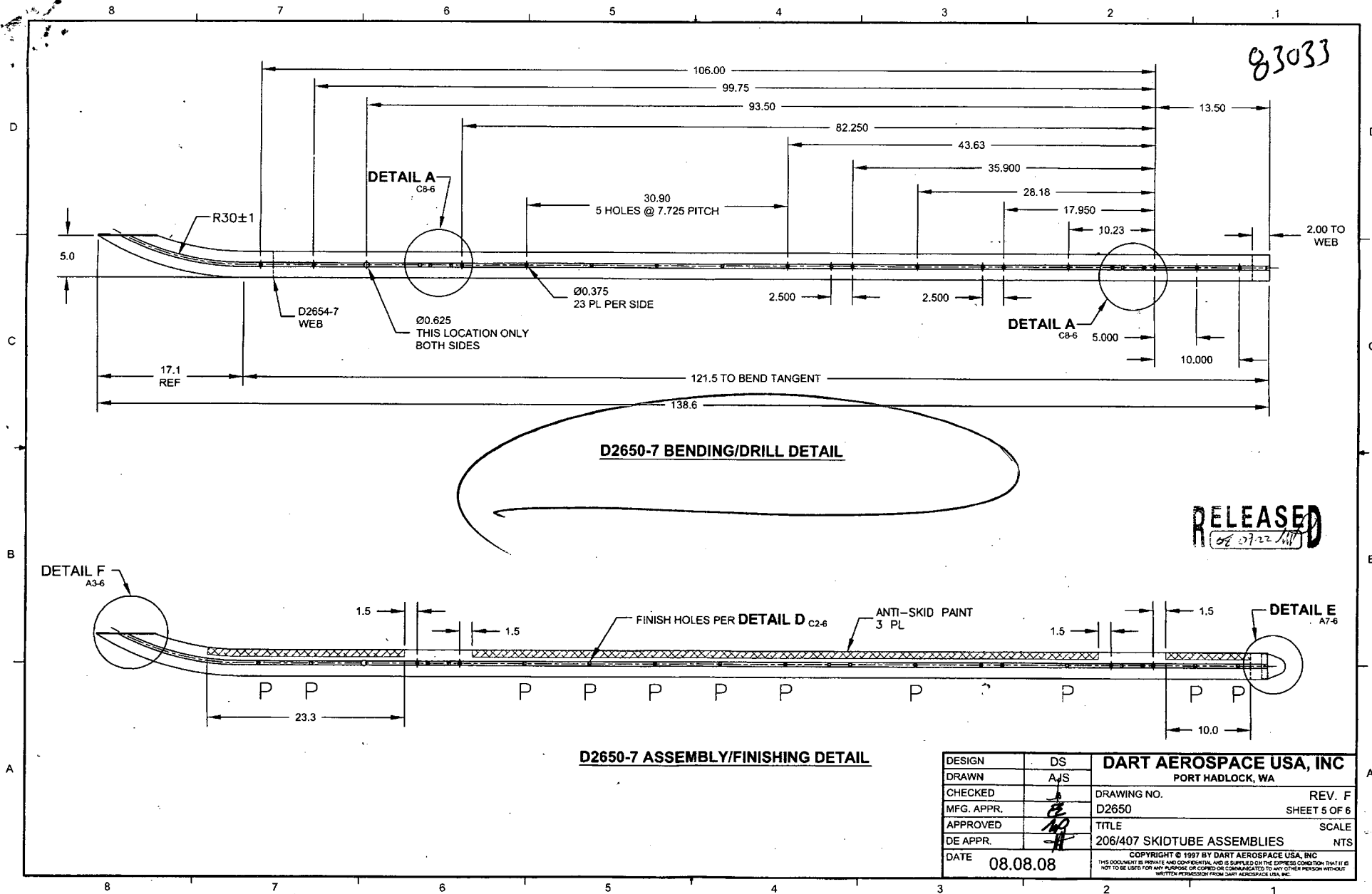


D2650-5 ASSEMBLY/FINISHING DETAIL

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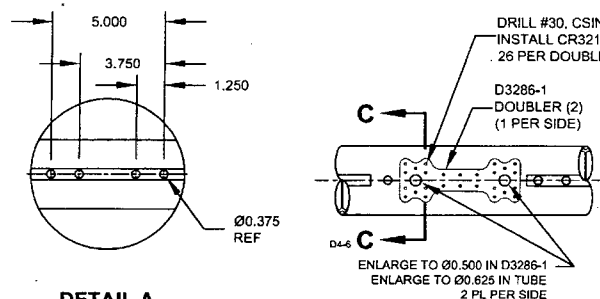


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D2650-7 ASSEMBLY/FINISHING DETAIL

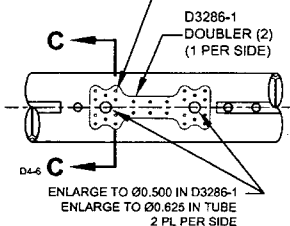
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MFG. APPR.	B	D2650	SHEET 5 OF 6
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83033



DETAIL A
SCALE 2X

C2-2
D7-2
C2-3
D7-3
C2-4
D7-4
C2-5
D6-5



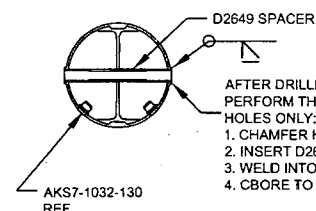
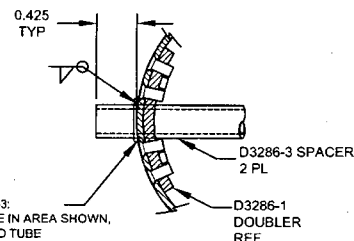
DETAIL B
SCALE 2X

C3-2
C3-3

- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO Ø0.500
 4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.030x45°
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE.



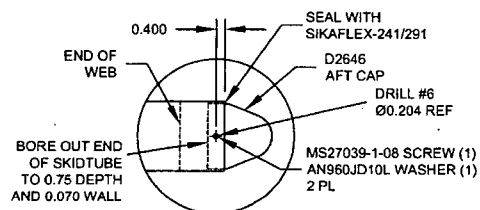
SECTION C-C C7-6
SCALE NONE



DETAIL D
FOR Ø0.375 HOLES ONLY
SCALE 3X

- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. CBORE TO Ø0.313 X 0.75 DP

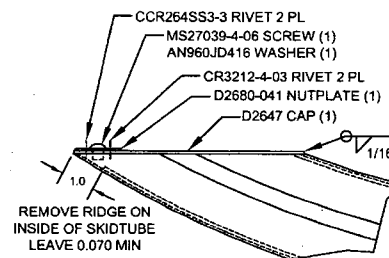
B4-2
B4-3
B4-4
B4-5



DETAIL E
SCALE 2X

B2-2
B2-3
B1-4
B1-5

ORIENTATION OF D2680-041



DETAIL F
SCALE NONE

B8-2
B8-3
B8-4
B8-5

DETAIL F NOTES:

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

RELEASED
08-09-22-19

DESIGN		DS		DART AEROSPACE USA, INC	
DRAWN		AJS		PORT HADLOCK, WA	
CHECKED				DRAWING NO.	
MFG. APPR.				D2650	
APPROVED				TITLE	
DE APPR.				206/407 SKIDTUBE ASSEMBLIES	
DATE		08.08.08		SHEET 6 OF 6	
				SCALE	
				NTS	

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NO. 291

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 83400
Part number: A206-642-S41
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum.
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[]

Penetration:

pass[☒] fail[]

UNACCEPTABLE

Cracks:

pass[☒] fail[]

Undercut:

pass[☒] fail[]

Pin holes:

pass[☒] fail[]

Overlap (cold lap)

pass[☒] fail[]

Porosity (surface):

pass[☒] fail[]

Coloration:

pass[☒] fail[]

Qualifier [Signature]

Date of Test Coupon 12.04.26

Welder [Signature]

Date of Test Coupon 12.04.26

The above named individual is qualified in accordance with AWS D17.1.2001 to weld